

ABSTRACT OF THE DISCLOSURE

An electric motor having an armature which includes a coating of thermally conductive plastic applied in a conventional injection molding process. The armature also includes a fan which is integrally formed from the thermally conductive plastic applied to the armature. This completely eliminates the need to apply one or more coatings of a trickle resin to the armature. It also eliminates the need to separately form and secure a fan by a suitable adhesive to the armature, which together significantly simplifies the manufacturing and cost of the armature. The plastic coating also better fills the spaces between the magnet wires, thus promoting even more efficient cooling and better holding of the magnet wires stationary relative to one another. The thermally conductive plastic coating may be mixed with other suitable materials to provide a density approximately equal to the magnet wires. This eliminates the need to balance the armature after the injection molding step.

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